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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/898,910	07/03/2001	Stephan Erbel	SCHWP0145US	9595

7590 04/09/2003
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EXAMINER

CHURCH, CRAIG E

ART UNIT PAPER NUMBER

2882

DATE MAILED: 04/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

Applicant(s)

Examiner

Group Art Unit

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☐ Responsive to communication(s) filed on _____.
- ☐ This action is FINAL.
- ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-15 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-15 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
 - ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
 - ☐ received in Application No. (Series Code/Serial Number) _____.
 - ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

*Certified copies not received: _____.

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☐ Interview Summary, PTO-413
- ☐ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Other _____

Office Action Summary

Claims 13 and 14 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Apparatus claims 13 and 14 improperly depend on method claim 1.

The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Claims 1-4 and 7-15 are rejected under 35 U.S.C. § 103 as being unpatentable over Swerdloff (5661773) in view of applicant's admission of prior art. Swerdloff teaches a radiotherapy method comprising

acquiring CT images of a region to be treated
creating a treatment plan based on said images
treating the patient

acquiring new CT images

altering the previous treatment plan based on the new images. See, for example, lines 46-61 of column 3, Applicant's disclosure reveals that inverse planning was known at the time of the invention, and It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the Swerdloff method for any type of therapy plan including inverse planning since it is not limited by the Swerdloff teaching.

Claims 5 and 6 are rejected under 35 U.S.C. § 103 as being unpatentable over Swerdloff in view of WO 97/40766 cited by applicant. Precise patient positioning is essential in radiotherapy, and it would have been obvious therefor to one of ordinary skill in the art at the time the invention was made to employ the WIPO system in the Swerdloff method.

Applicant's arguments filed February 10, 2003 have been fully considered but they are not deemed to be persuasive. Section 112 of the patent statutes stipulates that a dependent claim should further limit or restrict that which is defined by its parent claim, and claims 13 and 14 do not.

At the outset, it is noted that claim 1 is drafted in narrative form and that it recites no specific method steps to be performed. It simply specifies that an updated or modified therapy plan is calculated on the basis of a previously approved therapy plan and on newly acquired x-ray images of the patient to be treated. Lines 46-61 of column 3 explain

Yet another object of the invention is to provide an interface that can be used to observe radiation delivered during a therapy session which can be used to alter radiation doses during later therapy sessions. By identifying the radiation entering and exiting a patient along each ray of a beam the radiation absorbed along each ray from each gantry angle can be identified and a post-treatment tomographic image associated with the patient slice can be provided. The human interface of the present invention can be used to observe the post-treatment tomographic image and compare the post-treatment image to the desired dose map to identify treatment errors. Where a treatment error (ie. over or under radiation) has occurred, the error can be noted using the human interface and can be used to alter desired dose maps during later therapy sessions to compensate for the errors.

Applicant's statement on page 5 of the amendment "Instead it is assumed that errors will occur and Swerdloff seeks to correct these errors by building a completely new plan" clearly misrepresents the Swerdloff teaching quoted above. Except for the particular type of therapy plan, this is precisely what applicant is claiming. Applicant's disclosure reveals that inverse planning was known at the time of the invention, and It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the Swerdloff method for any type of therapy plan including inverse planning since it is not limited by the Swerdloff teaching. See also applicant's admission of prior art on page 2 of the amendment.

That Swerdloff's amended plan may be based in part on dose errors in the original plan discovered during treatment is not precluded by applicant's claim language. The claims do not mention errors, and nothing in the instant claims precludes an intermediate step of actually performing treatment as argued. In fact the

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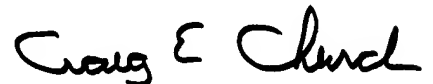
-5-

applicant's disclosure explains that his new plan succeeds treatment and that his new plan results from dose errors as well as from positioning errors. Page 3 of the specification states "the interior of the patient can shift between the different treatment appointments", and page 4 states "In an advantageous embodiment, the dosage distribution of an older, conventionally or inversely produced radiotherapy plan which was found to be "OK" is used as a preset value for the recalculation".

While applicant argues that his "invention helps to identify input parameters for the inverse planning which rapidly lead to an acceptable result", no such limitation appears in claim 1.

The German reference mentioned on page 6 of the amendment was not considered because examiner does not read german. If applicant believes this reference to be relevant, he should submit an English translation.

Any inquiry concerning this communication should be directed to Examiner Church at telephone number (703) 308-4861.



CRAIG E. CHURCH
Senior Examiner
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